FIG. 1

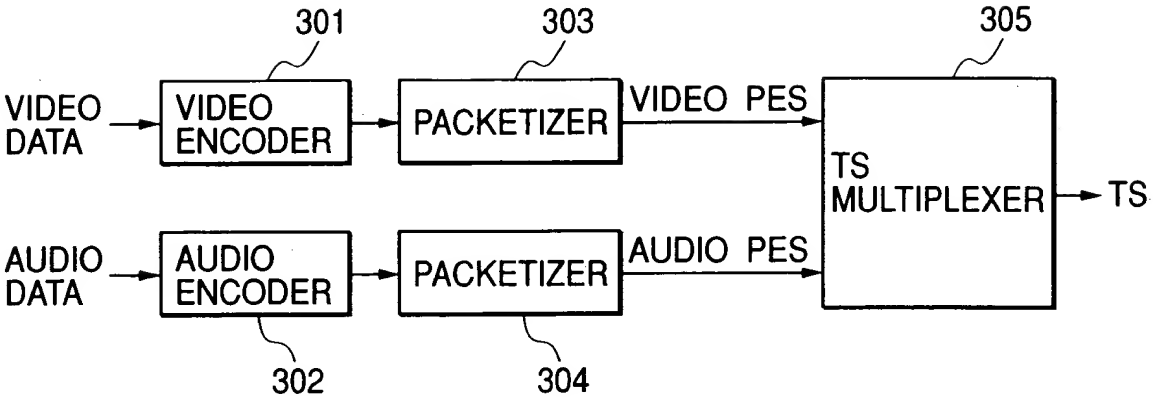

301
303
305
VIDEO DATA
VIDEO ENCODER
PACKETIZER
VIDEO PES
TS MULTIPLEXER
TS
AUDIO DATA
AUDIO ENCODER
PACKETIZER
AUDIO PES
302
304

FIG. 2

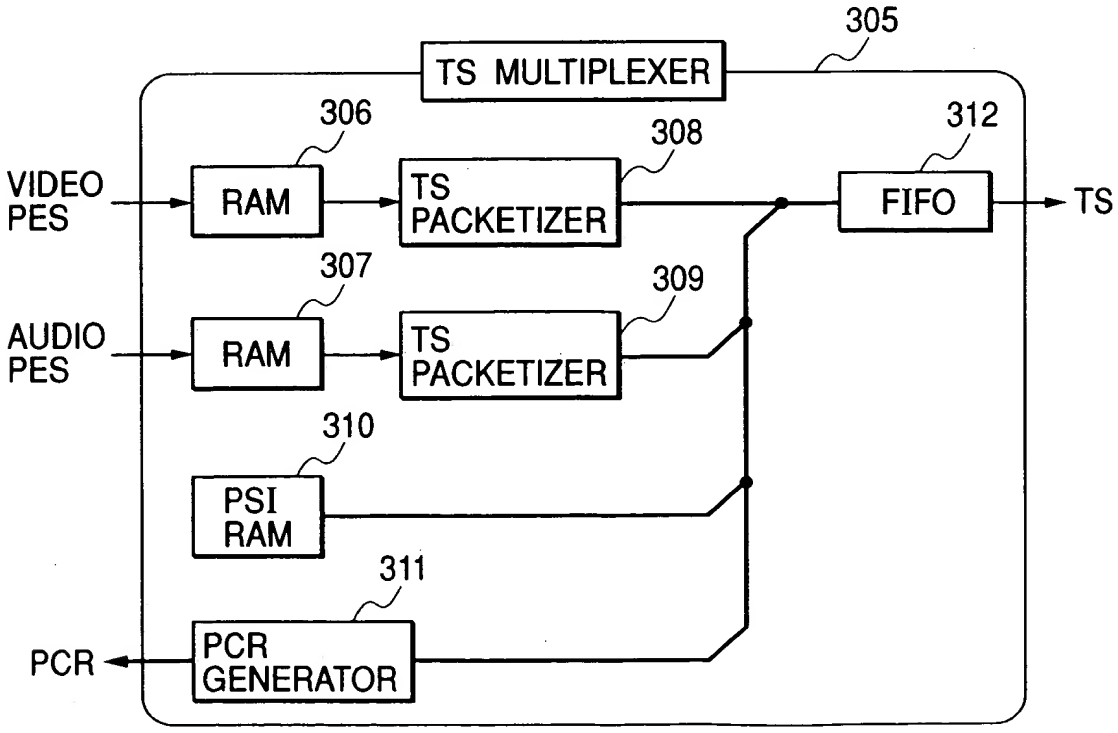

305
TS MULTIPLEXER
306
308
312
VIDEO PES
RAM
TS PACKETIZER
FIFO
TS
307
309
AUDIO PES
RAM
TS PACKETIZER
310
PSI RAM
311
PCR
PCR GENERATOR

FIG. 3

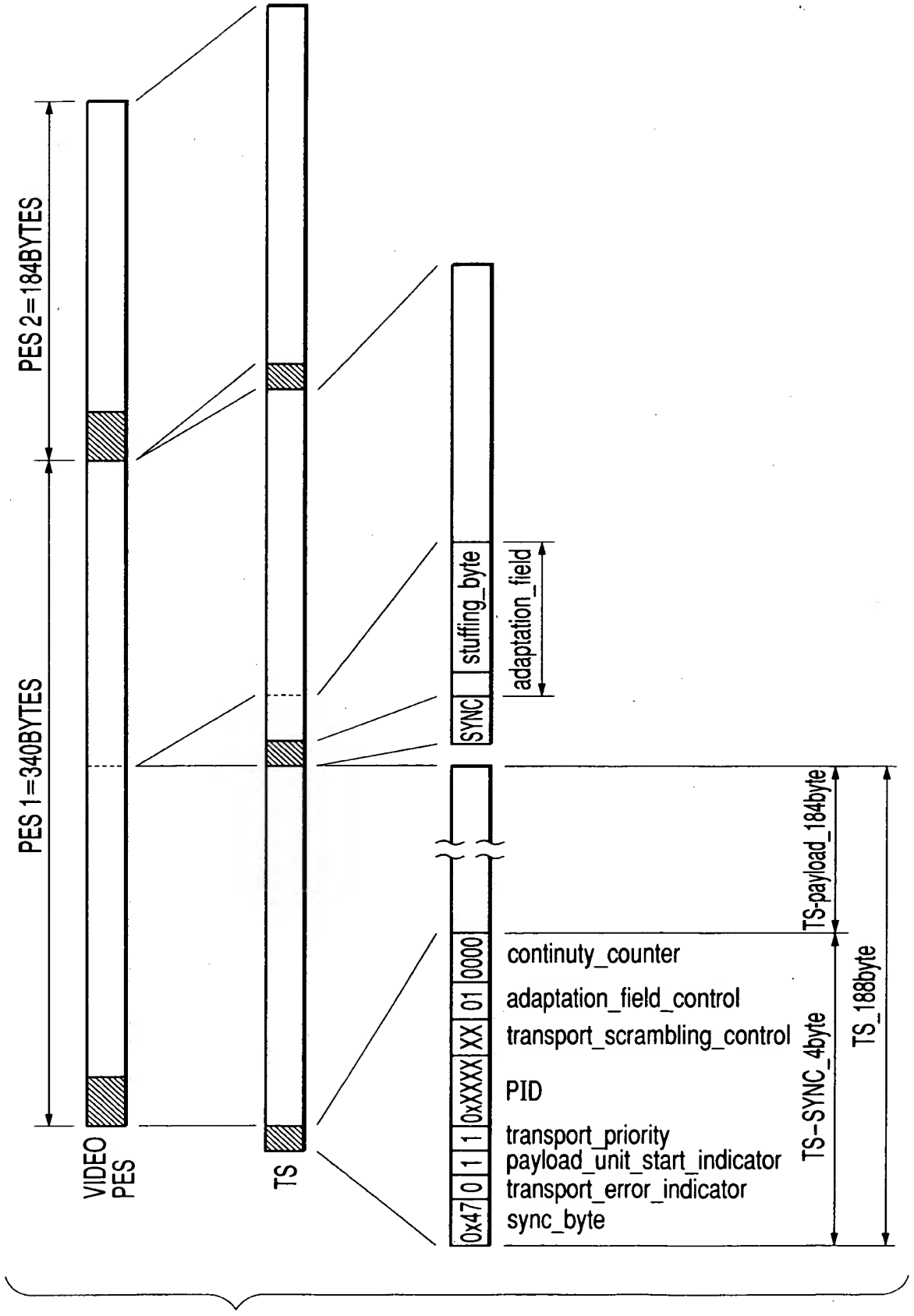

PES 2=184BYTES
PES 1=340BYTES
VIDEO PES
TS
SYNC
stuffing_byte
adaptation_field
0x47
0
1
1
0xXXXX
XX
01
0000
sync_byte
transport_error_indicator
payload_unit_start_indicator
transport_priority
PID
transport_scrambling_control
adaptation_field_control
continuty_counter
TS-SYNC_4byte
TS_188byte
TS-payload_184byte

FIG. 4

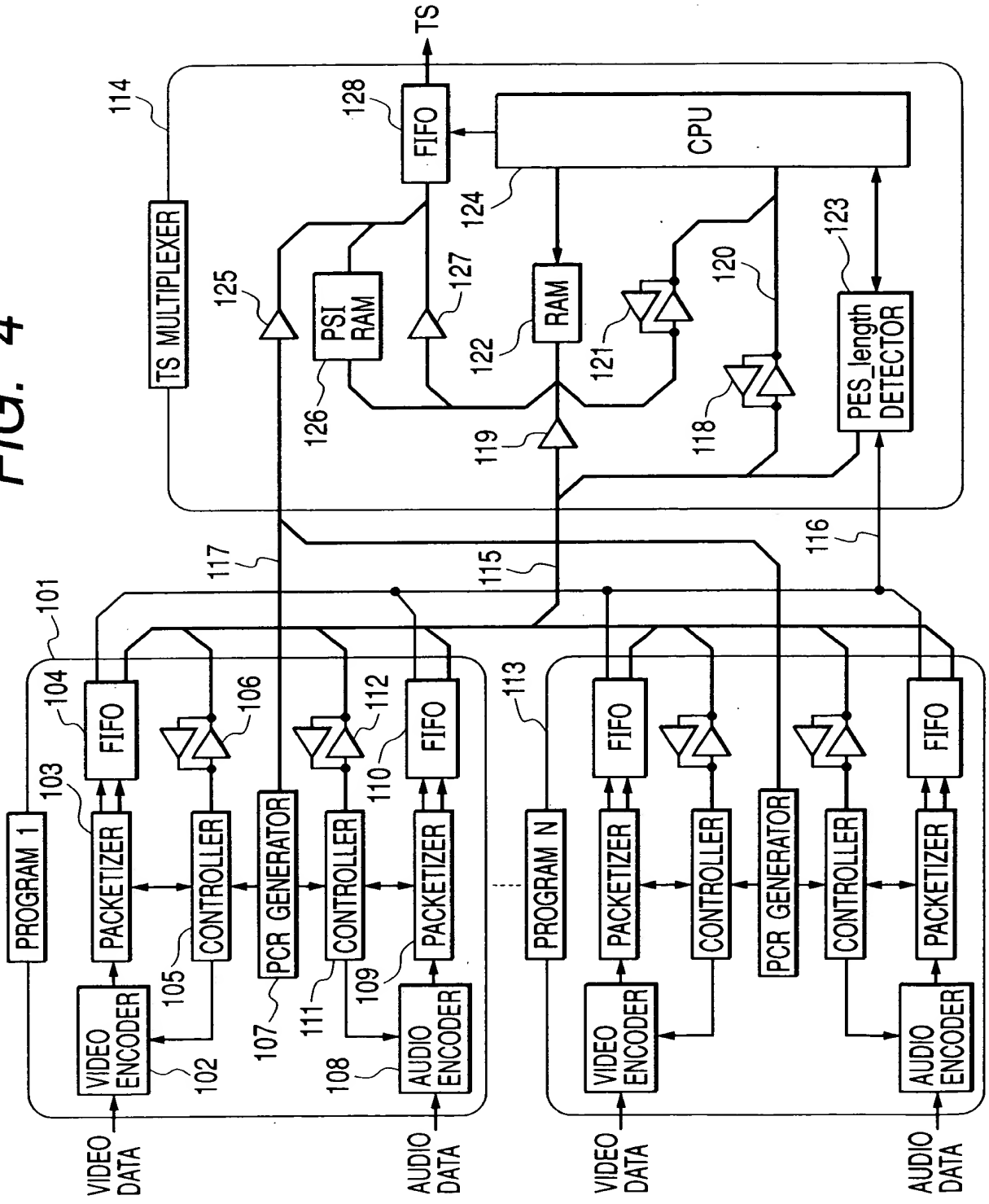

TS
114
128
FIFO
CPU
TS MULTIPLEXER
124
125
PSI RAM
127
RAM
122
121
120
123
PES_length DETECTOR
126
119
118
117
115
116
101
104
106
112
110
113
PROGRAM 1
103
PACKETIZER
CONTROLLER
PCR GENERATOR
CONTROLLER
PACKETIZER
PROGRAM N
105
VIDEO ENCODER
102
107
111
109
AUDIO ENCODER
108
VIDEO DATA
AUDIO DATA

FIG. 5

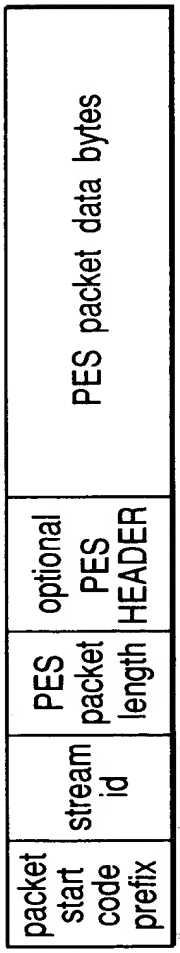

packet start code prefix
stream id
PES packet length
optional PES HEADER
PES packet data bytes
24
8
16

FIG. 6

FIG. 6A
FIG. 6B

FIG. 6A

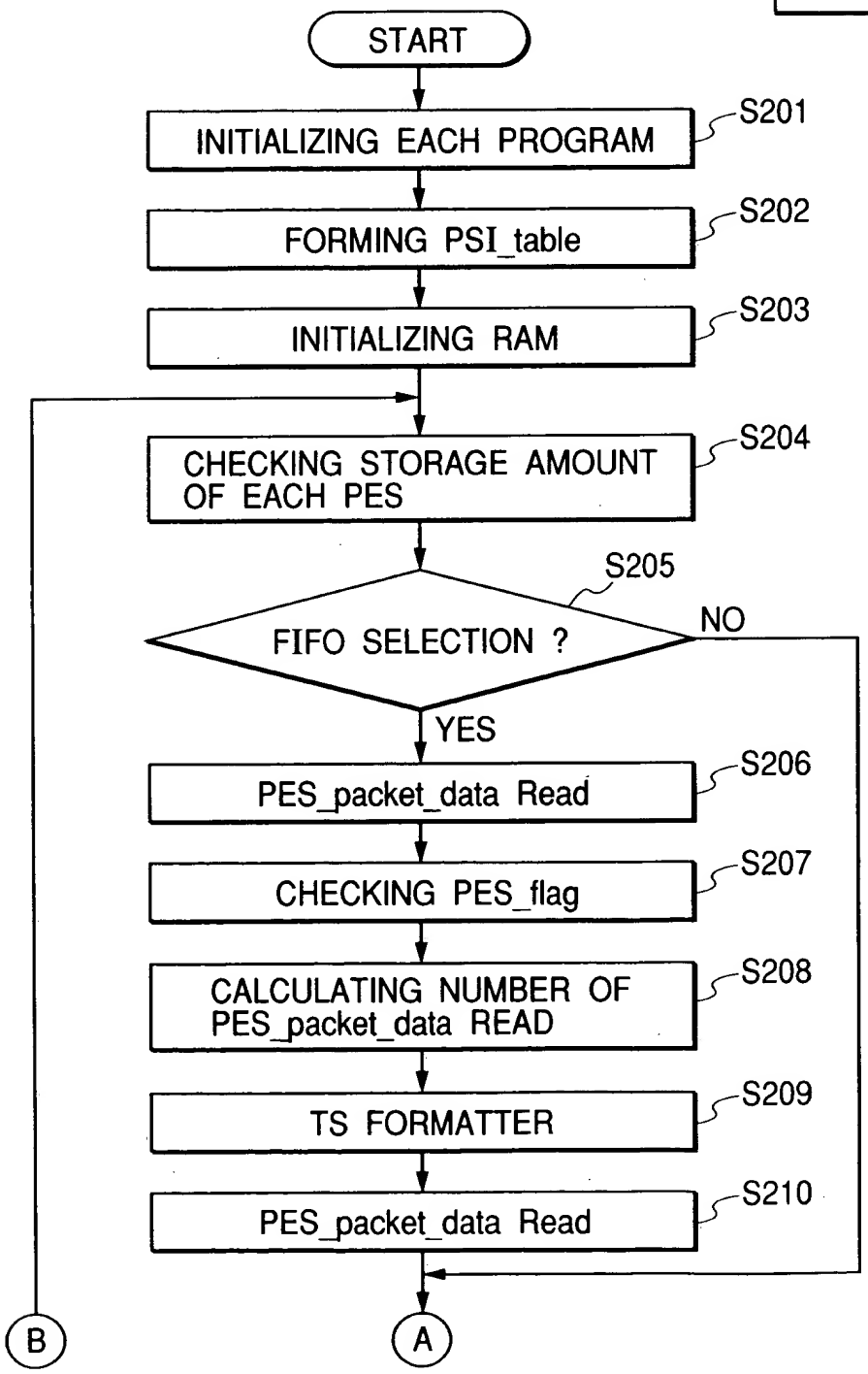


FIG. 6B

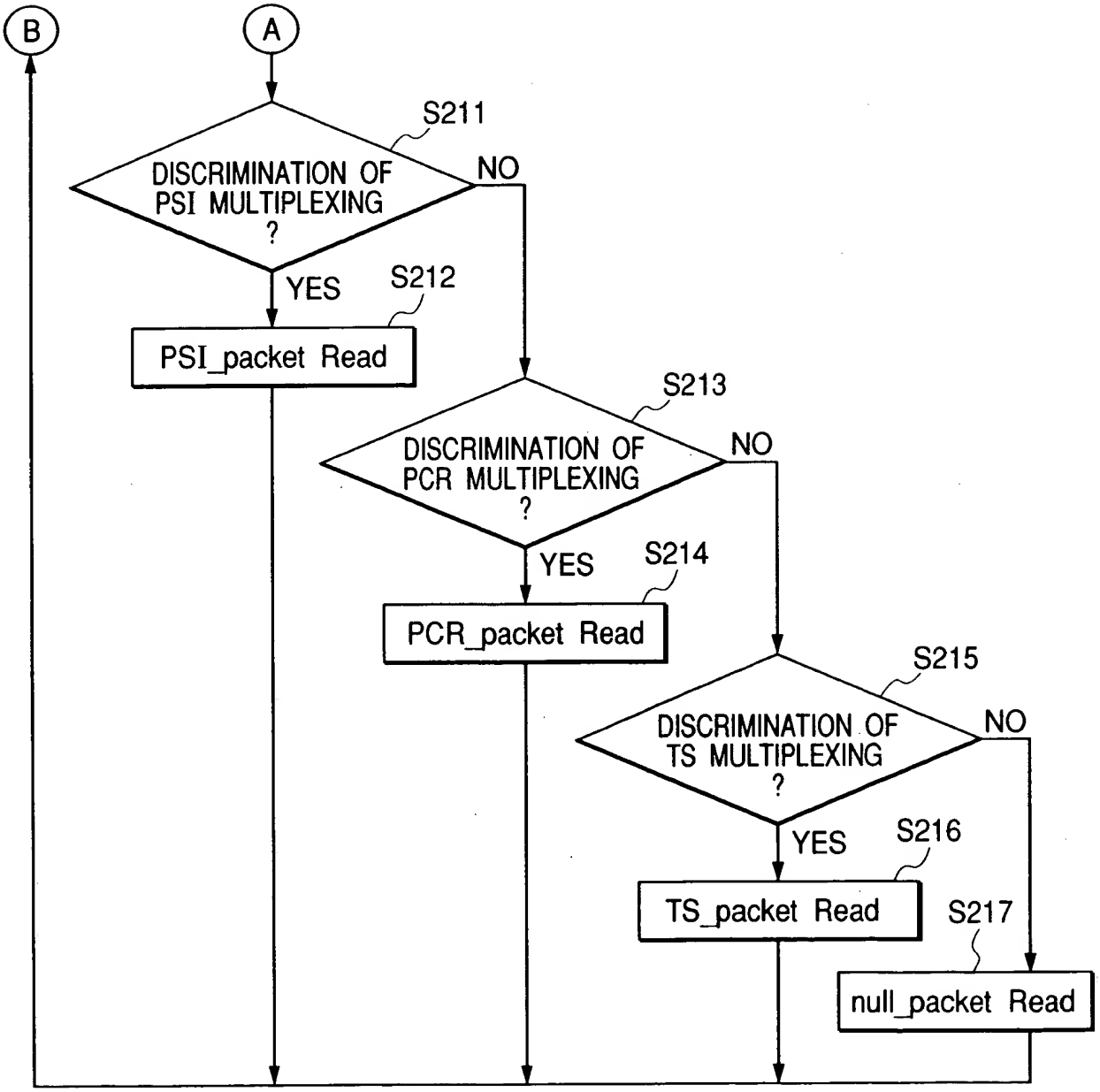

B
A
S211
DISCRIMINATION OF PSI MULTIPLEXING ?
NO
YES
S212
PSI_packet Read
S213
DISCRIMINATION OF PCR MULTIPLEXING ?
NO
YES
S214
PCR_packet Read
S215
DISCRIMINATION OF TS MULTIPLEXING ?
NO
YES
S216
TS_packet Read
S217
null_packet Read

FIG. 7

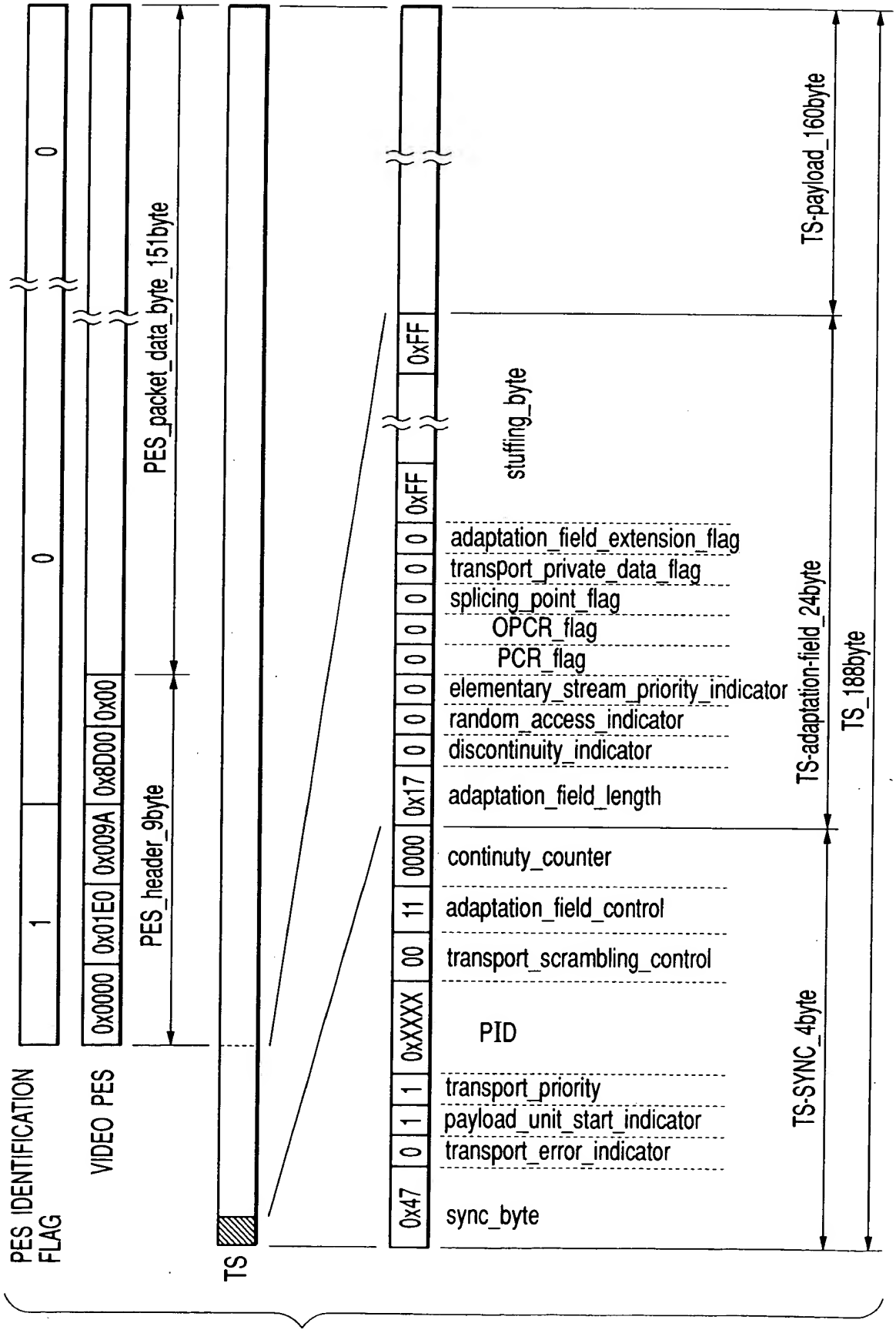

PES IDENTIFICATION FLAG
VIDEO PES
TS
PES_header_9byte
PES_packet_data_byte_151byte
1
0
0
0x0000
0x01E0
0x009A
0x8D00
0x00
0x47
0
1
1
0xXXXX
00
11
0000
0x17
0
0
0
0
0
0
0
0
0xFF
0xFF
sync_byte
transport_error_indicator
payload_unit_start_indicator
transport_priority
PID
transport_scrambling_control
adaptation_field_control
continuty_counter
adaptation_field_length
discontinuity_indicator
random_access_indicator
elementary_stream_priority_indicator
PCR_flag
OPCR_flag
splicing_point_flag
transport_private_data_flag
adaptation_field_extension_flag
stuffing_byte
TS-SYNC_4byte
TS-adaptation-field_24byte
TS_188byte
TS-payload_160byte

FIG. 8

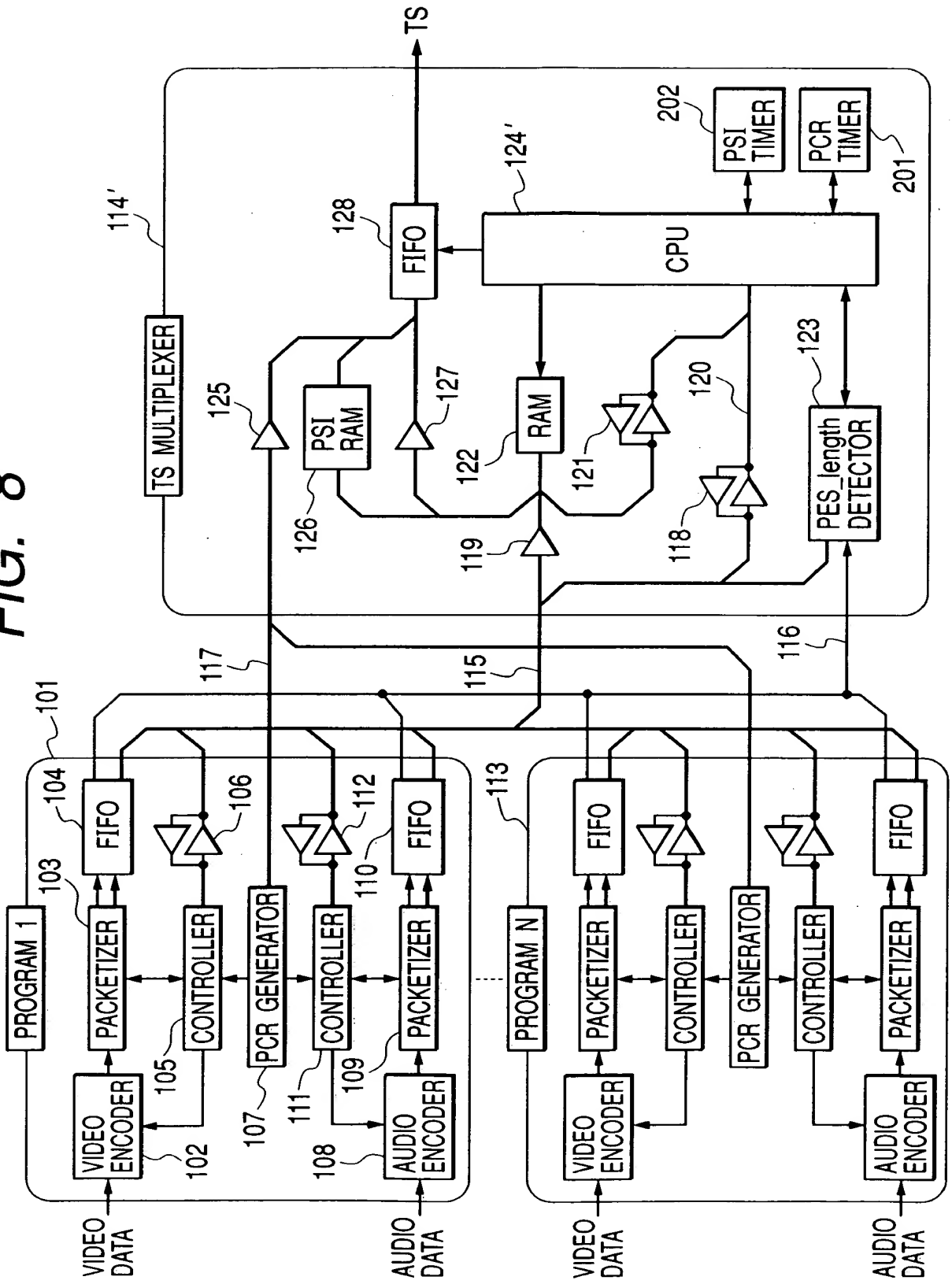

TS
114'
TS MULTIPLEXER
128
FIFO
124'
CPU
202
PSI TIMER
PCR TIMER
201
125
PSI RAM
127
122
RAM
121
120
123
PES_length DETECTOR
126
119
118
117
115
116
101
PROGRAM 1
PROGRAM N
104
FIFO
103
PACKETIZER
106
CONTROLLER
112
PCR GENERATOR
110
FIFO
113
105
109
111
107
102
108
VIDEO ENCODER
AUDIO ENCODER
VIDEO DATA
AUDIO DATA

FIG. 9

FIG. 9A

FIG. 9A
FIG. 9B

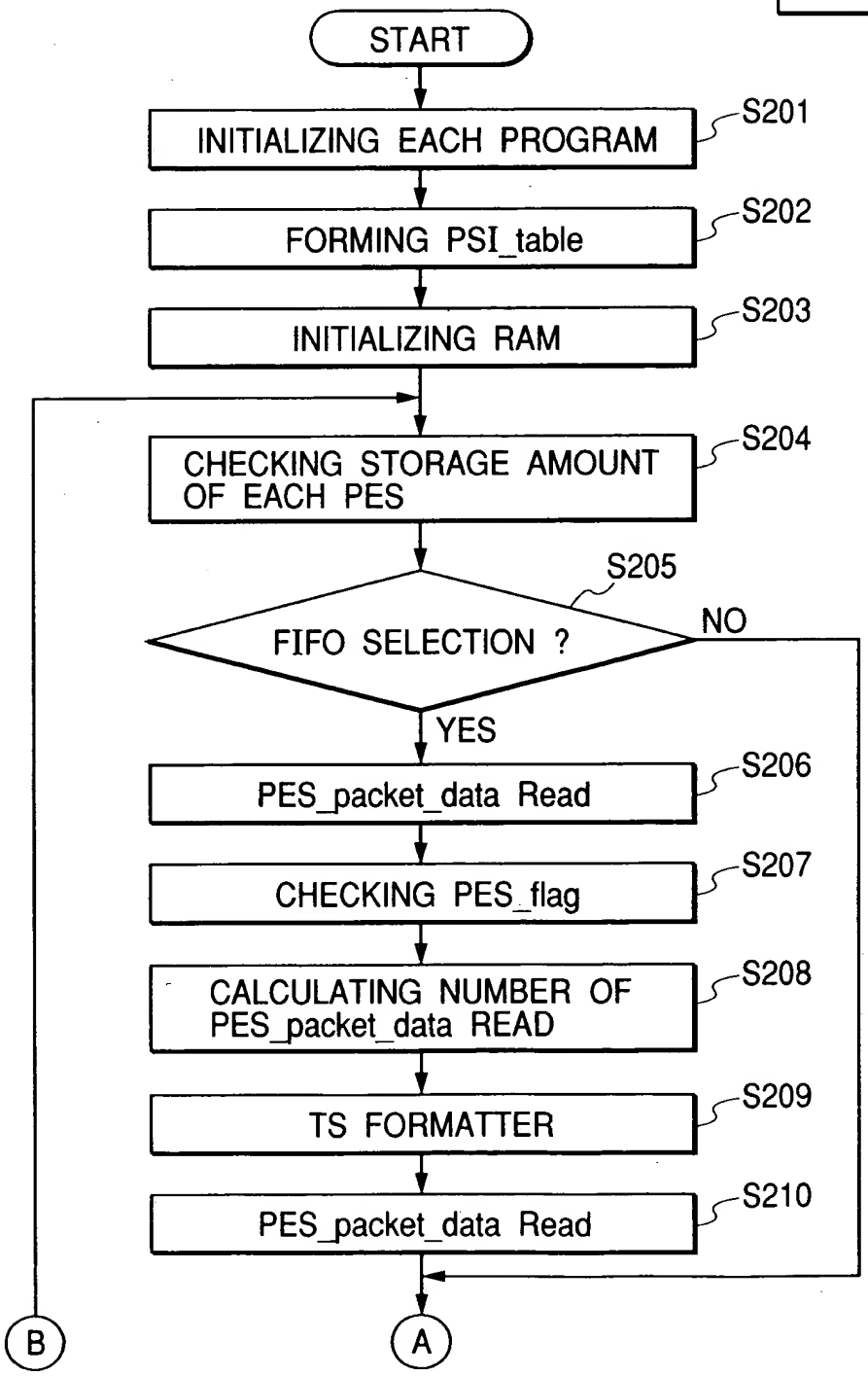
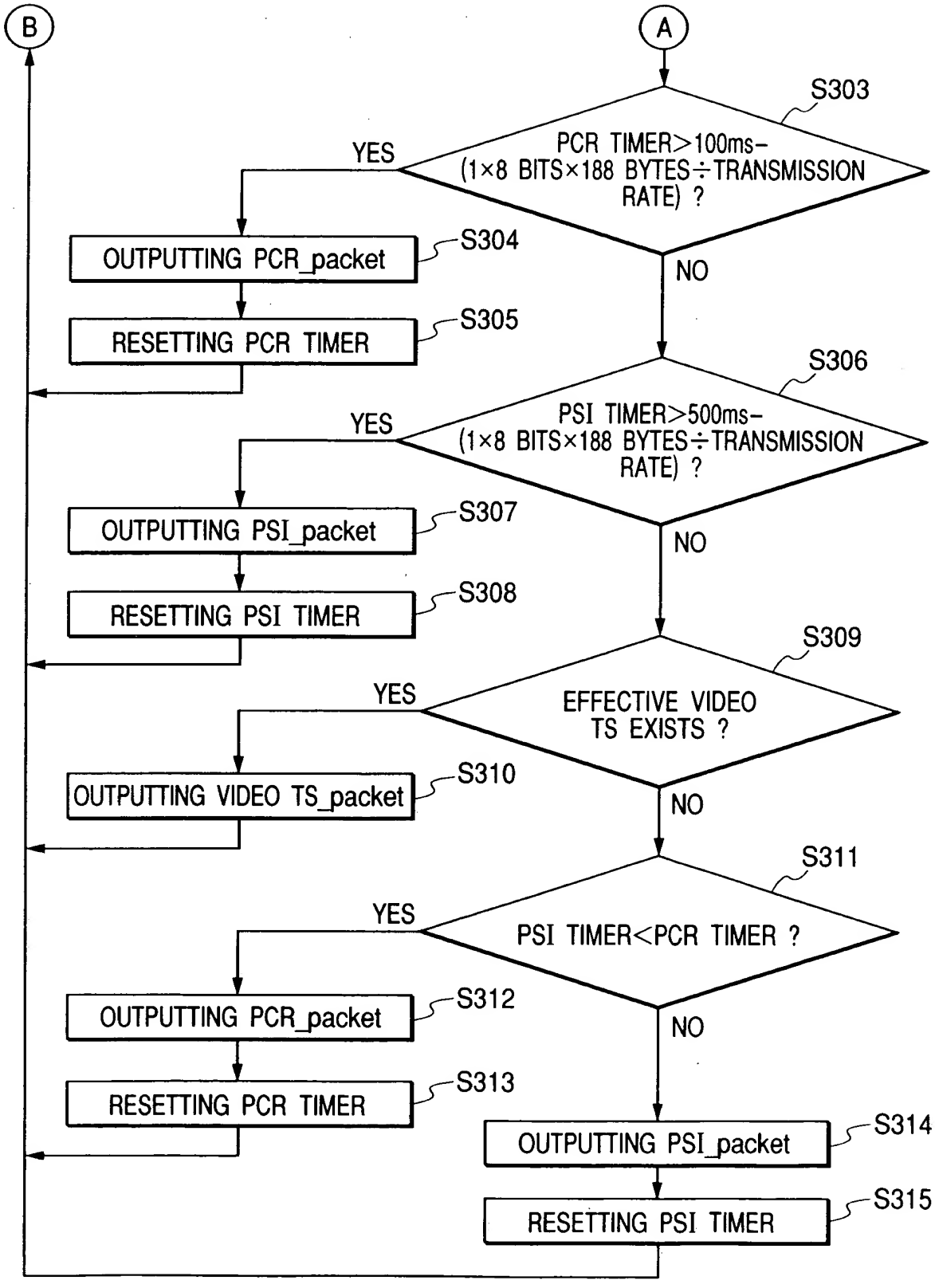


FIG. 9B


B
A
S303
PCR TIMER>100ms-
(1×8 BITS×188 BYTES÷TRANSMISSION
RATE) ?
YES
NO
OUTPUTTING PCR_packet
S304
RESETTING PCR TIMER
S305
S306
PSI TIMER>500ms-
(1×8 BITS×188 BYTES÷TRANSMISSION
RATE) ?
YES
NO
OUTPUTTING PSI_packet
S307
RESETTING PSI TIMER
S308
S309
EFFECTIVE VIDEO
TS EXISTS ?
YES
NO
OUTPUTTING VIDEO TS_packet
S310
S311
PSI TIMER<PCR TIMER ?
YES
NO
OUTPUTTING PCR_packet
S312
RESETTING PCR TIMER
S313
OUTPUTTING PSI_packet
S314
RESETTING PSI TIMER
S315